

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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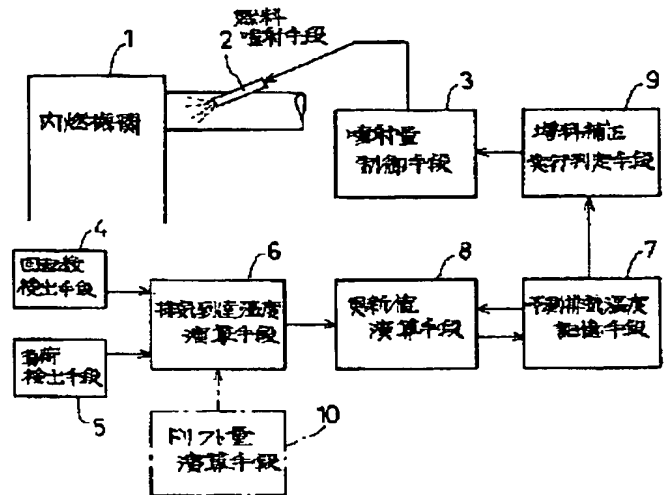
APPLICATION DATE : 16-07-93  
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APPLICANT : TOYOTA MOTOR CORP;

INVENTOR : SHIBATA NORIO;

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TITLE : INJECTION QUANTITY CONTROLLER OF INTERNAL COMBUSTION ENGINE



**ABSTRACT :** PURPOSE: To realize the detection of exhaust air temperature which makes good precision compatible with responsibility by obtaining exhaust air temperature by simulation based on exhaust air reach temperature which is calculated based on load and speed of an internal combustion engine.

**CONSTITUTION:** An exhaust air temperature computing means 6 computes convergence temperature as exhaust air reach temperature in accordance with engine speed detected by an engine speed detection means 4 and load detected by a load detection means 5. On the other hand, estimated temperature of exhaust air temperature at each instant is stored in an estimated exhaust air temperature storage means 7, and an updated value computing means 8 calculates an updated value which becomes a new estimated exhaust air temperature based on the computed change rate from a difference between the estimated temperature and exhaust air reach temperature. Thus, estimated exhaust air temperature which simulates actual exhaust air temperature with high precision is stored. As a consequence, an increased quantity compensation execution judging means 9 judges that fuel increased quantity compensation should be carried out only when exhaust air temperature of an engine 1 reaches the overheated condition and gives a command of adequate injection quantity from an injection control means 3 to a fuel injection means 2.

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